

Abstract

A method and apparatus for auto-configuring layer 3 intermediate devices in computer networks by extending the Dynamic Host Configuration Protocol (DHCP). The devices generate, transmit and receive DHCP messages having novel options 5 embedded therein. The options permit a layer 3 device to request and receive from a DHCP server a unique, overall IP address that may be assigned to the device. The device may also request and receive one or more IP subnets and corresponding IP addresses for each of its interfaces. The device may further receive the routing protocols to be used on the various subnets. The layer 3 device can thus be auto-configured 10 with IP configuration parameters, including IP subnets, IP addresses and routing protocols without the time-consuming, manual involvement of a network administrator.